a. Protection of Incumbent Systems

46. Under our existing rules, paging systems are protected from co-channel interference by a variety of rules that govern transmitter height and power, distance between stations, the licensee's protected service area, and/or the field strength of the licensee's service and interfering signals. In general, we propose to retain these criteria to define the interference protection rights of incumbent licensees under any geographic licensing scheme that may be adopted. There are some variations, however, in the specific methodologies used to measure interference in the different paging services. Therefore, we seek comment on whether to adopt a standard methodology for measuring interference in all paging bands or to retain existing variations in our rules.

47. Lower Band CCP Channels. Under our existing rules, lower band CCP licensees receive protection based on whether the interfering contours of adjacent co-channel stations overlap with the service contour of the licensee's station. These contours are not based on measured field strength, but on a standard model that establishes the distance from the transmitting antenna site to the contour, based on effective antenna height and transmitter power. In the *Part 22 Rewrite Order*, we adopted a series of mathematical formulas to determine service and interfering contours in each CCP frequency range, other than 931 MHz.[94] These formulas are used with an "eight-radial contour method," which determines the distance from the transmitting antenna site to the service and interfering contours along the eight cardinal radials from the transmitter site.[95] The resulting contours very closely approximate those that would result from use of the propagation curves in the *Carey Report*[96] which were used for several decades to make assignments in the Public Mobile Services. We determined in the *Part 22 Rewrite Order*, however, that using mathematical formulas would be easier and less susceptible to dispute.[97]

48. If we convert lower band CCP channels to geographic licensing, we propose to retain the mathematical formulas and contour overlap provisions we recently adopted in the *Part 22 Rewrite Order* to define the interference protection rights of incumbents. Thus, the allowable placement of facilities by a geographic licensee in relation to those of an incumbent would be defined by the incumbent's service contour and the geographic licensee's interference contour, as calculated under the current rules. We seek comment on this

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[94] *See* 47 C.F.R. §§ 22.537(d), 22.567(d), (f), and (g)(2).

[95] *Part 22 Rewrite Order*, 9 FCC Rcd at 6564.

[96] Roger B. Carey, Technical Factors Affecting the Assignment of Facilities in the Domestic Public Land Mobile Radio Service, Report No. R-6406 (June 24, 1964) (*Carey Report*).

[97] *Part 22 Rewrite Order*, 9 FCC Rcd at 6563-64.

proposal. Specifically, we ask commentators to provide empirical evidence showing whether the current Part 22 formulas would provide satisfactory co-channel protection to incumbents.

49. 931 MHz Channels. Our existing rules for 931 MHz paging resemble our lower band CCP rules, in that protection is determined by the overlap of the licensee's service contour and the interfering contours of co-channel stations. The 931 MHz rules differ from the lower band CCP rules, however, in that service and interfering contours are circles based on a table of standard radii, rather than the eight-radial contour method and mathematical formulas used in the lower band CCP rules.[98]

50. We seek comment on whether we should continue to base protection of incumbents on our existing tables if geographic licensing is adopted for 931 MHz channels. While use of a standard radius is simpler from an administrative perspective than using the lower band mathematical model, it is less flexible and far less precise in predicting actual interference, because it does not account for variations in the terrain and effective radiated power in different directions from the transmitter. We tentatively conclude that the eight-radial contour method may be preferable to a fixed radius method, because it will more reasonably predict potential interference to incumbents and provide geographic licensees with greater flexibility in placing their facilities. We invite comment on this tentative conclusion. Would use of the eight-radial contour method for 931 MHz co-channel interference protection enable independent incumbent and geographic licensees to co-exist more easily? Are there better means of providing co-channel protection?

51. Assuming that we adopt the eight-radial contour method for 931 MHz channels, we seek comment on the appropriate mathematical formula for determining service and interference contours. We propose to use the following mathematical formula, which is similar to the formulas used in the lower band CCP services:

$$d = k \times h^x \times p^y$$

The proposed formula is derived from the form of equations commonly used for propagation path loss.[99] In this formula, "d" is the radial distance to the contour, "h" is the antenna center of radiation height above average terrain along the cardinal radial, "p" is the radial effective radiated power.[100] The remaining factor "k" and exponents "x" and "y" are numerical figures

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[98] *See* 47 C.F.R. § 22.537(e), (f). *See also* Tables E-1 and E-2, 47 C.F.R. §22.537.

[99] Median path loss is generally given as $L = K - X \log h + Y \log d$, where L is loss expressed in dB, and K, X and Y are constants derived empirically or theoretically. *See, e.g.,* "Coverage Prediction for Mobile Radio Systems Operating in the 800/900 MHz Frequency Range", Section IV., p. 20., IEEE Transactions on Vehicular Technology, February 1988.

[100] We propose that the values used for the radial parameters (antenna height above average terrain and effective radiated power) be representative of the 45° sector centered on the cardinal radial.

that can be determined experimentally by matching the resulting curve to that of an established propagation model for a given signal field strength.

52. To determine the appropriate formula for the 931 MHz service and interference contour calculations, we propose to assume a median field strength of 47 dBμV/m as the basis for the service contour. Statistically, this equates to a reasonably strong field strength (in the 32 to 40 dBμV/m range) at more than 90% of locations in a suburban environment. For similar reasons, we propose to assume a median field strength of 21 dBμV/m as the basis for the interfering contour.[101] We propose to derive corresponding distances from these field strengths by using the Okumura 900 MHz propagation curves as our propagation model.[102] We believe that this is an appropriate model for general use throughout the U.S. and is suitable for devising the proposed mathematical formulas.[103] The specific formulas[104] would be:

Service: $d_{km} = 0.108 \times h_m^{0.61} \times p_w^{0.32}$

Interfering: $d_{km} = 3.033 \times h_m^{0.38} \times p_w^{0.16}$

Appendices B and C provide examples of service and interfering contours for a variety of antenna heights and transmitter powers.

53. We seek comment on the formulas proposed above and their suitability for calculating service and interfering contours for 931 MHz paging systems. Applying the formula, we note that a paging station operating at 1000 watts effective radiated power with an antenna height of 305 meters (1000 feet) above average terrain would have a service contour of approximately 32.2 kilometers (20 miles), which is consistent with the service radius afforded under our current rules. Nonetheless, we invite commenters to indicate whether any variations in the formula are needed. We also seek comment on the field strength proposed for service and interfering contours. We encourage commenters to propose alternative formulas, provided that such alternatives have a sound technical basis and are not unduly complex.

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[101] This provides a carrier to interference (C/I) ratio of 26 dB on average.

[102] *See* Y. Okumura *et al.*, *Field strength and its variability in VHF and UHF land-mobile radio service*, 16 Rev. Elec. Commun. Lab., 825-873 (1968). The 900 MHz propagation curves are shown as Fig. 41(c) on page 865. The curves are based on a mobile receive antenna height of 1.5 meters above ground, which seems appropriate for paging receivers. We also propose to use Okumura's correction for suburban areas (*id.*, Figure 20 at 845), and the correction for rolling, hilly terrain with a terrain roughness factor of $\Delta h \approx 50$ meters. *Id.* at Figure 28(b) at 851.

[103] The current stepwise 931 MHz service and interfering radii (§ 22.537, Tables E-1 and E-2, 47 C.F.R. 22.537) were based on the Okumura 900 MHz curves.

[104] In this formula, "km" represents kilometers, "m" represents meters, and "w" represents watts.

54. 929 MHz Exclusive Channels. Interference protection for exclusive 929 MHz licensees currently is provided by rules requiring standard minimum geographic separations between stations, which are based on station height and power.[105] These separations are based on the same height-power table that is used for 931 MHz paging. Unlike our CCP rules, however, our PCP rules do not formally define a protected service contour or interference contour for each station.

55. If we adopt geographic licensing for exclusive 929 MHz channels, we believe that 929 MHz incumbents should be entitled to interference protection on the same basis as 931 MHz incumbents, because the technical characteristics of 929 and 931 MHz systems are virtually identical. Thus, we propose to adopt service and interference contour criteria for 929 MHz paging using the same methodology proposed above for 931 MHz. We seek comment on this proposal. Is there any reason to use a different method to define the interference protection rights of 929 MHz licensees, as opposed to 931 MHz licensees? Are there any alternative methods that we should consider?

56. Non-Exclusive PCP Channels. By definition, paging systems on non-exclusive PCP channels do not receive protection from interference under our rules. Instead, our rules prescribe operating requirements such as monitoring prior to transmitting to determine if the channel already is in use, minimizing the length of messages, and yielding to others transmitting communications related to the immediate safety of life.[106] If we convert any of these channels to exclusive licensing, however, the issue arises as to whether incumbent licensees should receive interference protection. If so, should the interference protection be different or the same as for other exclusive channels?

b. Maximum Power and Height-Power Limits

57. Maximum Power Limits. Under our existing rules, the maximum effective radiated power (ERP) limit for 931 MHz, nationwide 929 MHz, and narrowband PCS facilities is 3500 Watts ERP.[107] In the *Part 22 Rewrite* proceeding, we concluded that a maximum power limit of 3500 Watts ERP is appropriate for paging facilities in the 931 MHz band, because it allows for the use of high power facilities where needed, yet provides sufficient protection from intermodulation interference and receiver desensitization.[108] For

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[105] Under our current rules, 929 MHz licensees are required to comply with co-channel separation standards set forth in a table in 47 C.F.R. § 90.495(b)(2) (Minimum Separation Between Co-Channel Stations).

[106] *See, e.g.*, 47 C.F.R. § 90.403.

[107] *See* 47 C.F.R. § 22.535(a), 47 C.F.R. § 90.494(g) and 47 C.F.R. § 24.132(c).

[108] *See Part 22 Rewrite Order*, 9 FCC Rcd at 6513, ¶¶ 72-82. Intermodulation interference occurs wherever a number of base stations, transmitters, and receivers, operate in close proximity to each other, *i.e.*, on the same or immediately adjacent roof tops, mountain peaks, etc. Under such conditions, strong signals from adjacent transmitters may interact with each other in the receiver of a neighboring base station to produce interfering

example, high power facilities might be needed in areas where shadowing or building penetration is a problem, for high speed data transmission, or where the use of several smaller facilities would not be economical. Under our rules, the maximum power for 929 MHz non-nationwide facilities currently is 1000 Watts.[109] We tentatively conclude that the maximum ERP limit for these facilities should be raised to a maximum of 3500 Watts in order to bring the rules governing non-nationwide 929 MHz facilities into conformity with those already in effect for 931 MHz, nationwide 929 MHz, and narrowband PCS facilities. We believe that this change would provide 929 MHz licensees with the benefits of higher power operation without unduly increasing the risk of interference.

58. We propose to retain the current maximum ERP limits for the various lower band paging channels.[110] We increased these limits in CC Docket No. 88-135 after careful consideration, and we believe that the limits adopted in that proceeding remain appropriate.[111] We seek comment on this proposal and any alternatives.

59. Height-Power Limits. Height-power limits serve to limit the service and interfering range of a facility to a constant distance. Thus, if a facility is modified to raise the antenna height, the power must be lowered so that the service and interfering ranges remain essentially unchanged. Height-power limits are useful when co-channel assignments are made on a site-by-site basis using a single fixed minimum geographical separation distance requirement, because they allow licensees some flexibility to employ various combinations of antenna height and transmitting power while maintaining the validity of the fixed separation method.[112]

60. Height-power limits are also useful for limiting the area that can be covered by a single facility. Therefore, they are more effective for services where independent systems consist of a single transmitter than for services with wide-area systems. In the 931 MHz band, we recently eliminated the height-power limit, because most systems in that band are multi-transmitter wide-area systems covering large areas. We concluded that it is more cost-

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signals on other frequencies, including that of the mobile station being received. *See* Frequency Allocations, Docket No. 13847, *Further Notice of Proposed Rule Making*, 10 FCC.2d 885, 886-87, ¶ 4 (1967). Receiver desensitization occurs where a strong signal causes a receiver to not detect other low level signals. *See, e.g.,* Amendment of Part 87 of the Commission's Rules, PR Docket No. 93-199, *Notice of Proposed Rule Making*, 8 FCC Rcd 4763, 4763 n.4 (1993).

[109] *See* 47 C.F.R. § 90.494(f).

[110] See 47 C.F.R §§ 22.535, 22.565.

[111] *See* Height and Power Increases in the Public Mobile Service, CC Docket No. 88-135, *Report and Order*, 4 FCC Rcd 5303 (1989), *modified, Order on Reconsideration*, 5 FCC Rcd 4604 (1990).

[112] Both 929 MHz and 931 MHz paging facilities originally were licensed on a single minimum geographical separation distance of 70 miles between transmitters.

effective for licensees to cover a large area with a high power facility than with numerous smaller facilities.[113] We propose to eliminate the height-power limit for 929 MHz licensees, because many of the paging systems in the 929 MHz band are multi-transmitter wide-area systems that are similar to systems in the 931 MHz band. We note, however, that some licensees with facilities located near international borders still may be subject to certain height-power limits as a result of international agreements.

61. With respect to the lower band channels -- most of which continue to be occupied by smaller systems -- we propose to maintain the current height-power limits, so that we can continue to limit the range of each facility and promote spectrum efficiency.[114] We invite comment on any and all aspects of our proposals concerning height-power limits.

c. Adjacent Geographic Licensees

62. As part of our geographic licensing proposal, we must determine the interference protection obligations of geographic licensees with respect to neighboring geographic licensees with shared borders. We tentatively conclude that geographic licensees should provide interference protection either by (1) reducing the signal level at their service area boundary (*e.g.*, by positioning directional antennas in such a way that the contour does not encroach on a geographic licensee's adjacent territory), or (2) negotiating some other mutually acceptable agreement with all potentially affected geographic licensees in adjacent areas.[115] Our goal is to provide licensees with as much flexibility as possible, without compromising our ability to ensure interference protection from geographic licensees in adjacent areas. We seek comment on our proposal and any alternatives.

6. Licensing in Mexican and Canadian Border Areas

63. In the Mexican and Canadian border areas, paging channel availability may be restricted by treaty and limitations on ERP and antenna height may be placed on additional channels.[116] As a result, geographic licensees may not be able to operate on paging channels in border areas, or there may be significant restrictions on ERP or antenna height, which may make these geographic areas less attractive. In other services where we have converted to

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[113] *See Part 22 Rewrite Order*, 9 FCC Rcd at 6528, ¶ 74.

[114] *See, e.g.*, 47 C.F.R. § 22.535(c).

[115] Similar interference protection was given to PCS operators with respect to interference from other PCS operators. *See* 47 C.F.R. §§ 24.134, 24.237. *See also PCS Second Report and Order*, 8 FCC Rcd at 7773-7775, ¶¶ 175-77.

[116] For instance, we have an agency-to-agency understanding with the Canadian Department of Communications for sharing arrangements in portions of the 929-932 MHz band. *See* 47 C.F.R § 1.955. We have a December 19, 1995 letter of understanding with Mexico related to the temporary use of 929-932 MHz frequencies for paging services within 120 kilometers (75 miles) of the common border.

geographic licensing, we have decided not to distinguish between border areas and non-border areas for licensing purposes.[117] Our rationale has been that applicants will assess the impact of the border requirements when valuing those geographic licenses for competitive bidding purposes.[118]

64. We tentatively conclude that, if we convert paging services to geographic licensing, all geographic areas should be licensed on a uniform basis without distinguishing border from non-border areas, even if some spectrum is unusable. We believe that applicants for paging services, like those in other services, will be able to assess the impact of more limited spectrum availability when valuing those geographic areas for competitive bidding purposes. Moreover, altering the size of particular geographic areas because they are located near an international border is likely to be administratively unworkable. Thus, we propose that geographic licensees be entitled to use any available border-area channels, subject to the relevant rules regarding international assignment and coordination of such channels. We seek comment on this proposal.

7. Eligibility

65. In proposing to adopt competitive bidding rules for all exclusive paging channels, we seek comment on whether there should be any restrictions on eligibility for geographic licenses. For example, we recognize that incumbent licensees may be concerned about competing applications where they already have substantial operations and there is little unoccupied spectrum in which a new entrant could operate. On the other hand, restricting eligibility in favor of incumbents simply may allow incumbents to obtain the benefits of geographic licensing for less than full market value and preclude new entrants, because incumbents would be insulated from the possibility of competing applications.

66. We tentatively conclude that both incumbents and new entrants should be allowed to apply for geographic licenses without restrictions on eligibility. We believe that a key purpose of competitive bidding is to let the marketplace determine the level of demand for licenses. Use of competitive bidding also seeks to ensure that licenses are granted to those who value the spectrum most highly.[119] Where multiple applicants are interested in serving a certain geographic area, we believe it is inappropriate to limit eligibility to certain applicants while preventing others from bidding on the license. We also are skeptical of claims that incumbents will be required to pay more than market value for geographic licenses if eligibility is unrestricted. To the extent that an incumbent already provides service to a substantial portion of a geographic area, there is little incentive for other applicants to bid for that geographic area. Indeed, it is possible that in many instances, incumbents will not be

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[117] *See, e.g., 900 MHz Second Report and Order*, 10 FCC Rcd at 6908, ¶¶ 62-63.

[118] *Id.*

[119] *See Competitive Bidding Second Report and Order*, 9 FCC Rcd at 2349-50, ¶ 5.

subject to competing applications, because most likely no other applicant will be interested in applying for the geographic area given the extent of incumbent presence. Similarly, in cases where there are multiple co-channel incumbents in a geographic area, we tentatively conclude that incumbents can form consortia or joint ventures and apply collectively for the geographic license, or enter into partitioning agreements.[120] In proposing use of auctions without restricting eligibility, we believe the rules should allow parties a reasonable opportunity to explore these options prior to the filing deadline.[121] Of course, formation of consortia, joint ventures or other bidding arrangements remains subject to Commission review under the public interest standard, and we would expect that entities entering into such arrangements comply with all relevant Commission rules, policies and all other applicable antitrust laws.[122]

67. We seek comment on these proposals. In particular, commenters are requested to discuss the relationship between the coverage already provided by an incumbent in a geographic area and the perceived value of the geographic license to that incumbent and other potential applicants. What is the likelihood that incumbents who have achieved substantial coverage in their geographic areas will be subject to competing applications for geographic licenses? Should we allow incumbents to form joint ventures or consortia to apply for geographic licenses? Would not imposing restrictions on eligibility affect the potential for applicants to engage in anti-competitive conduct against competitors? Do the antitrust laws provide adequate safeguards against the risk of such anti-competitive conduct?

8. Channel Aggregation Limit

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[120] We observe that the consortium, as a licensee, would be subject to the same conditions as all other licensees, including issues of control. *See* rural telephone company partitioning discussed *infra* at Section III(B)(6)(f).

[121] In forming joint ventures or consortia, the parties may not collude. *See* proposed rules prohibiting collusion, discussed *infra* at Section III(B)(4)(d).

[122] Applicants will also be subject to existing antitrust laws. For example, we would expect that this would prohibit discussions with respect to bid prices between any applicants who have applied for licenses in the same geographic market. *See United States v. Champion Int'l Corp.*, 557 F.2d 1270 (9th Cir.), 434 U.S. 938 (1977); *see also United States v. Addyston Pipe & Steel Co.*, 85 F. 271, 293 (6th Cir.1898), *modified and aff'd* 175 U.S. 211 (1899). In addition, agreements between two or more actual or potential competitors to submit collusive, non-competitive or rigged bids are *per se* violations of Section One of the Sherman Antitrust Act, 15 U.S.C. § 1 *et seq*. *See, e.g., United States v. MMR Corporation (LA)*, 907 F.2d 489 (5th Cir. 1990); *United States v. W.F. Brinkley & Sons Construction Co.*, 783 F.2d 1157 (4th Cir. 1986); *United States v. Finis P. Renest, Inc.*, 509 F.2d 1256 (7th Cir. 1975), *cert. denied*, 423 U.S. 874. Similarly, agreements between actual or potential competitors to divide or allocate territories horizontally in order to minimize competition are *per se* violations of the Sherman Act (*United States v. Topco*, 405 U.S. 596 (1972); *Affiliated Capital Corporation v. City of Houston*, 700 F.2d 226, 236), and such agreements are anticompetitive regardless of whether the parties split a market in which they both do business or whether they merely reserve one market for one party and another for the other party. *See Palmer v. BRG of Georgia, Inc.*, 498 U.S. 46, 49 (1990).

68. We propose to assign geographic licenses on a channel-by-channel basis, which raises the issue of whether we also should impose a limit on the number of paging channels that a single licensee may hold in each geographic area. Under our site-specific paging licensing rules, aggregation *per se* is not restricted, but applicants generally are limited to applying for one channel at a time in a given area to prevent channel warehousing.[123] On the other hand, in narrowband PCS, which resembles paging in some respects, we have imposed an outright limit on applicants acquiring more than three channel pairs in any geographic area, which limits narrowband licensees to between 150-300 kHz of spectrum, depending on the bandwidth of the particular channels involved.[124]

69. We seek comment on whether an aggregation limit is appropriate for paging frequencies, and if so, what that limit should be. To date, significant aggregation of paging channels has not occurred. In most markets, channels are allocated among numerous providers, and it is rare for a single licensee to hold more than three or four channels in a market. The risk of channel warehousing also appears limited; where licenses are subject to competitive bidding, licensees are unlikely to bid for more channels than they actually need or can use. Finally, it is questionable whether allowing licensees to aggregate paging spectrum freely poses any risk of competitive harm. In the *CMRS Third Report and Order*, we imposed a 45 MHz cap on aggregation of cellular, broadband PCS, and SMR spectrum, because of the potential that aggregation in excess of this amount would limit entry by other competitors.[125] In that decision, however, we excluded narrowband services (including paging) from the cap altogether, concluding that there is little risk that an entity could use narrowband allocations to exert undue market power over CMRS as a whole.[126] We further recognized that the services provided by narrowband radio service licensees can, for the most part, be provided by the licensees subject to the cap.[127] In sum, it may be that even if one entity aggregated all the paging channels, new entrants from broadband and narrowband PCS, cellular service, and other CMRS spectrum, would ensure that paging service continued to be provided at market rates and other competitive conditions.

70. While these factors may weigh against limiting paging channel aggregation, other factors may support it. In the *CMRS Third Report and Order*, our decision to exclude narrowband services from the 45 MHz cap was based, in part, on the presence of intra-service caps such as the narrowband PCS aggregation limit. An aggregation limit nonetheless may be necessary to protect competition in the paging market, even if paging has only a negligible

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[123] *See Part 22 Rewrite Order*, 9 FCC Rcd at 6523, ¶ 48. This rule was implemented to eliminate an inconsistency between the additional channel policies for one-way paging channels and two-way paging channels.

[124] *See Narrowband PCS Order*, 9 FCC Rcd at 1314, ¶ 34.

[125] *See CMRS Third Report and Order*, 9 FCC Rcd at 8109-10, ¶ 263.

[126] *Id.* at 8111, ¶ 267.

[127] *Id.*

effect on competition in the CMRS market as a whole. Finally, we question whether it is appropriate not to limit aggregation by paging licensees when their narrowband PCS competitors are subject to such limits. In light of these factors, we seek comment on whether we should impose limits on aggregation of paging channels similar to the limits now imposed on narrowband PCS. We also note that some narrowband PCS licensees may attempt to aggregate system capacity across services. Thus, we seek comment on whether it would be more appropriate to cap the combined aggregation of paging and narrowband PCS spectrum rather than imposing a limit on paging only. If we impose a cap, we also must consider how it would affect incumbent paging operators who already are licensed on multiple channels in a geographic area. We tentatively conclude that, if a cap is imposed, it should not prevent an incumbent from obtaining geographic licenses for any channel on which it is licensed in the geographic area. We believe that this approach strikes an appropriate balance between the goal of encouraging competition while at the same time preserving the rights of incumbents. We seek comment on this tentative conclusion.

B. Competitive Bidding Issues

1. Auctionability of Paging Services

71. In the *Competitive Bidding Second Report and Order*, we concluded that mutually exclusive applications in the Part 22 Public Mobile Services, including common carrier paging, generally would be subject to competitive bidding.[128] We reiterated this conclusion in the *Part 22 Rewrite Order*, in which we determined that competitive bidding procedures should be used to resolve mutually exclusive applications in the 931 MHz paging service.[129] To date, however, we have not adopted specific competitive bidding rules for Part 22 paging applications. As discussed in greater detail below, therefore, we seek comment in this *Notice* on what competitive bidding methods should be used to award licenses in conjunction with our proposal to adopt geographic licensing for Part 22 paging services.

72. We also seek comment on whether to adopt equivalent competitive bidding procedures for competing applications for exclusive PCP channels. In the *Competitive Bidding Second Report and Order*, we indicated our intention to use competitive bidding to select from among competing applications if two or more PCP systems file mutually exclusive initial applications because our rules explicitly contemplate the provision of service to eligible subscribers for compensation.[130] In the *Competitive Bidding Second Report and Order*, we noted that although mutually exclusive 900 MHz PCP applications should be subject to competitive bidding, exclusivity in the 900 MHz PCP service was a very recent phenomenon and existing first-come, first-served licensing procedures, frequency coordination, and private

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[128] *See Competitive Bidding Second Report and Order*, 9 FCC Rcd at 2359, ¶ 61.

[129] *Part 22 Rewrite Order*, 9 FCC Rcd at 6536, ¶ 105.

[130] *See Competitive Bidding Second Report and Order*, 9 FCC Rcd at 2359, ¶ 63.

settlement among conflicting applicants may obviate the need for the agency to resolve conflicting PCP applications in most, and perhaps all, cases.[131] Therefore, we deferred consideration of specific auction rules until we reasonably could be certain they were needed.[132]

73. We anticipate that a large number of applicants will file mutually exclusive geographic applications for PCP services. In addition, while coordination may reduce the likelihood of mutual exclusivity, it may result in the exclusion of qualified applicants, and does not necessarily award spectrum to the applicant that values it the most. Competitive bidding, by contrast, ensures that qualified applicants who place the highest value on the available spectrum, and who will provide valuable services rapidly to the public, will prevail in the selection process. Thus, we tentatively conclude that all potential conflicts among PCP applicants will not be eliminated by our proposed geographic licensing scheme and that competitive bidding procedures will be necessary to select among mutually exclusive applicants for exclusive PCP channels. We seek comment on this tentative conclusion.

74. Our tentative conclusion is a logical outgrowth from our decision in the *CMRS Third Report and Order* that PCP and CCP are "substantially similar" services that should be subject to comparable regulation.[133] Assuming that we establish geographic licensing for both services, we believe it would be incongruous to require competing CCP applicants to bid for licenses, while allowing "comparable" PCP applicants to use first-come, first-served procedures that give one applicant priority over another based upon the speed of filing. Indeed, we are concerned that using disparate licensing procedures could create a competitive imbalance between the two services, which would run counter to our regulatory symmetry goals. Therefore, we propose to adopt comparable competitive bidding procedures for both exclusive PCP channels and CCP channels. We seek comment on our proposal.

2. Competitive Bidding Design

a. Bidding Methodology

75. In the *Competitive Bidding Second Report and Order*, we established criteria to select which auction design method to use for particular auctionable services.[134] Generally, we concluded that awarding licenses to those parties who value them most highly will foster Congress's policy objectives of stimulating economic growth and enhancing access to telecommunications services. We further noted that, because a bidder's ability to introduce

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[131] *Id.* at 2360, ¶ 67.

[132] *Id.* at 2359, ¶¶ 63-67.

[133] *CMRS Third Report and Order*, 9 FCC Rcd at 7988, ¶ 67.

[134] *See Competitive Bidding Second Report and Order*, 9 FCC Rcd at 2360-2375, ¶ 68-156.

valuable new services and to deploy them quickly, intensively, and efficiently increases the value of a license to that bidder, an auction design that awards licenses to those bidders with the highest willingness to pay tends to promote the development and rapid deployment of new services and the efficient and intensive use of the spectrum.[135] In determining how best to promote this objective, we identified several auction design elements which, in combination, produce many different auction types. The two most important design elements are: (1) the number of auction rounds (single or multiple), and (2) the order in which licenses are auctioned (sequentially or simultaneously).[136] These two elements can be combined to create four basic auction designs: sequential single round, simultaneous single round, sequential multiple round, and simultaneous multiple round.[137]

76. We seek comment on which of the above auction methodologies should be used for the auction of paging licenses. In the *Competitive Bidding Second Report and Order*, we stated that simultaneous multiple round auctions would be the preferred method where licenses have strong value interdependencies.[138] Accordingly, we have used this method in both broadband and narrowband PCS services,[139] the 900 MHz SMR service,[140] and the Multipoint Distribution Service (MDS).[141] We seek comment on whether the same value interdependencies apply to paging licenses. For example, paging appears to be similar to PCS, SMR and MDS in that applicants are likely to seek to aggregate geographic licenses to create regional or nationwide networks. On the other hand, there may be less substitutability among paging licenses for different channels, both because channel aggregation is not required to provide paging service and because channel selection may be largely dictated by which channels are currently licensed to incumbents in each market.

77. Even if we conclude that paging licenses are sufficiently interdependent to justify use of the simultaneous multiple round auction design in theory, there are practical considerations that could affect our decision. For example, the number of potential licenses that are subject to auction is likely to be quite large: MTA-based licensing of the 37 non-

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[135] *Id.* at 2360-61, ¶¶ 70-75.

[136] *See id.* at 2361, ¶ 79.

[137] *Id.* at 2362-2365, ¶¶ 80-97. The four auction designs are described in detail in the *Competitive Bidding Second Report and Order*.

[138] *Id.* at 2367, ¶¶ 109-111.

[139] *See Competitive Bidding Fifth Report and Order*, 9 FCC Rcd at 5542-44, ¶¶ 27-32 (broadband PCS); Implementation of Section 309(j) of the Communications Act - Competitive Bidding, *Third Report and Order*, PP Docket No. 93-253, 9 FCC Rcd 2941, 2951-54, ¶¶ 17-21 (1994) (*Competitive Bidding Third Report and Order)* (narrowband PCS).

[140] *See 900 MHz Second Order on Reconsideration,* 60 Fed. Reg. 48,913 at ¶ 153.

[141] *See MDS Report and Order*, 10 FCC Rcd at 9640-41, ¶¶ 106-108 .

nationwide 931 MHz channels alone would involve over 1,800 licenses, and this number will increase substantially if we license other paging channels on an MTA basis as well.[142] We seek comment on whether simultaneous multiple round auctions would be too burdensome to implement from an administrative perspective, given the large number of paging licenses. We also seek comment on whether any procedures we might implement, such as license grouping,[143] could ease this administrative burden. We ask commenters to address whether simultaneous multiple round auctions or another competitive bidding methodology such as oral outcry is most appropriate for the paging services.

b. License Grouping

78. Depending upon the auction methodology chosen, there are several alternatives for grouping of paging licenses. For example, the Commission determined in the *Competitive Bidding Second Report and Order* that in a multiple round auction, highly interdependent licenses should be grouped together and put up for bid at the same time, because such grouping provides bidders with the most information about the prices of complementary and substitutable licenses during the course of an auction.[144] We also determined that the greater the degree of interdependence among the licenses, the greater the benefit of auctioning a group of licenses together in a simultaneous multiple round auction.[145]

79. We seek comment on how paging licenses should be grouped for competitive bidding purposes and on possible license groupings. As noted above, we are unsure how much interdependence exists between paging licenses. We therefore seek comment on the benefits of possible license groupings. For example, it may be feasible to conduct one simultaneous multiple round auction for all channels, which would enable bidders to pursue many bidding strategies. However, it may be desirable to group licenses by channel, and auction the licenses on a channel-by-channel basis by geographic area. In a simultaneous multiple round auction, we could auction all of the markets for a single channel simultaneously. Another alternative would be to begin with the largest (*i.e.*, most populated) markets first and then move to smaller markets. If the markets with the largest populations -- which also are likely to be the most highly valued -- are auctioned first, losing bidders would have the opportunity to bid on licenses for smaller areas and aggregate them into the desired coverage area. Another license grouping alternative would be to group licenses by region, because many of the paging service providers tend to pursue regional service plans. Grouping

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[142] As discussed in Section III(A)(2), *supra*, we have tentatively concluded that MTAs form the most appropriate market-based service area for paging systems, and we seek comment on this and other options for defining market-area boundaries.

[143] *See* ¶¶ 77-79, *infra.*

[144] *Competitive Bidding Second Report and Order,* 9 FCC Rcd at 2366, ¶¶ 106-107.

[145] *Id.* at 2363-2364, ¶¶ 89-94.

by region may best reflect one set of interdependencies within the markets. We seek comment on these proposals for license grouping and any other grouping alternatives.

c. Bidding Procedures

80. In the *Competitive Bidding Second Report and Order*, the Commission established general procedures for simultaneous multiple round auctions, including bid increments, duration of bidding rounds, stopping rules, and activity rules. We further noted that these procedures could be modified on a service-specific basis. We seek comment on the bidding procedures that should be used for licensing of paging services.

81. Bid Increments. If we use a multiple round auction, we propose to establish minimum bid increments for bidding in each round of the auction, based on the same considerations in our prior orders.[146] The bid increment is the amount or percentage by which the bid must be raised above the previous round's high bid in order to be accepted as a valid bid in the current bidding round.[147] The application of a minimum bid increment speeds the progress of the auction and, along with activity and stopping rules, helps to ensure that the auction comes to closure within a reasonable period of time.[148] Establishing an appropriate minimum bid increment is especially important in a simultaneous auction with a simultaneous closing rule, because all markets remain open until there is no bidding on any license and a delay in closing one market will delay the closing of all markets. We seek comment on the appropriate minimum bid increments for paging services.

82. For example, if we use simultaneous multiple round auctions for paging services, we believe that such auctions should start with relatively large bid increments, and reduce the increments as the number of active bidders declines.[149] We also propose to adopt a minimum bid increment of five percent of the high bid in the previous round or $0.01 per activity unit,[150] whichever is greater. We believe that applying a $0.01 per activity unit minimum bid increment in addition to the percentage calculation is appropriate to provide flexibility for a wide range of different license values, and to ensure timely closure of the auction. In addition, we propose to retain the discretion to vary the minimum bid increments for individual licenses or groups of licenses at any time before or during the course of the

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[146] *See, e.g., Competitive Bidding Third Report and Order*, 9 FCC Rcd at 2953, ¶¶ 30-32.

[147] *Id.* at 2953, ¶ 30.

[148] *Id.*

[149] *Id.* at ¶¶ 32-33; *see also 220 MHz Second Memorandum Opinion and Order*, 60 Fed. Reg. at 46,564, ¶¶ 117-118.

[150] The term "activity unit" is defined as the number of megahertz of spectrum block multiplied by the population of the relevant service area, or "pops." The activity units/MHz-pops measurement is used to describe the activity rules, stage transition rules, bid increment rules, etc.

auction, based on the number of bidders, bidding activity, and the aggregate high bid amounts. We also ask commenters to address whether the minimum bid increments would vary depending upon the particular competitive bidding methodology employed for the paging services, and, if so, how the minimum bid increments would vary. We also propose to retain the discretion to keep an auction open if there is a round in which no bids or proactive waivers are submitted. We seek comment on these proposals.

83. Stopping Rules for Multiple Round Auctions. In a multiple round auction, a stopping rule must be established for determining when the auction is over: markets may close individually, simultaneously, or a hybrid approach may be used.[151] If we decide to use a multiple round auction, we believe that a market-by-market stopping rule would be most appropriate for the paging services. We also believe that a market-by-market stopping rule would be the least complex approach from an administrative perspective. Under a market-by-market approach, bidding closes on each license after one round passes in which no new acceptable bids are submitted for that particular license.[152] However, if we do not use a simultaneous multiple-round auction, we seek comment on whether a stopping rule is needed and if so, which one should be used. With a simultaneous stopping rule, bidding remains open on all licenses until there is no bidding on any license. Under a hybrid approach, a simultaneous stopping rule, coupled with an activity rule designed to bring the markets to close within a reasonable period of time, could be used to close auctions with high value licenses. For lower value licenses, the simpler market-by-market closing could be employed.[153] We propose to announce by Public Notice, before each auction, the stopping rule that we will use. Regardless of which stopping rule we ultimately apply, we further propose to retain the discretion to declare when the auction will end, or whether it be after one additional round or some other specified number of rounds. This proposal will ensure ultimate Commission control over the duration of the auction. We seek comment on this proposal.

84. Activity Rules. If we employ a market-by-market stopping rule, we tentatively conclude that it is unnecessary to implement an activity rule. An activity rule is less important when markets close one by one, because failure to participate in any given round may result in a lost opportunity to bid at all, if that round turns out to be the last. We seek comment on this tentative conclusion. We also ask commenters to address what activity rules, if any, would be appropriate if an alternative stopping rule was adopted. For example, in order to ensure that simultaneous auctions with simultaneous stopping rules close within a reasonable period, it may be necessary to impose an activity rule to prevent bidders from

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[151] *See Competitive Bidding Third Report and Order*, 9 FCC Rcd at 2954, ¶ 33. *See also 220 MHz Second Memorandum Opinion and Order*, 60 Fed. Reg. 46,564 at ¶ 119.

[152] *See Competitive Bidding Second Report and Order*, 9 FCC Rcd at 2370-71, ¶ 132.

[153] We also have sought comment on a hybrid stopping rule approach for 220 MHz EA licenses. *See 220 MHz Second Memorandum Opinion and Order*, 60 Fed. Reg. 46,564 at ¶ 120.

waiting until the end of the auction before participating. Because simultaneous stopping rules generally keep all markets open as long as anyone wishes to bid, they also create incentives for bidders to hold back until prices approach equilibrium, before making a bid and risking payment of an additional payment for withdrawing.[154] This could lead to very long auctions.

85. Thus, in the *Competitive Bidding Second Report and Order,* we adopted the Milgrom-Wilson activity rule as our preferred activity rule where a simultaneous stopping rule is used.[155] We have subsequently adopted or proposed the Milgrom-Wilson rule in each of our simultaneous multiple round auctions.[156] The Milgrom-Wilson approach encourages bidders to participate in early rounds by limiting their maximum participation to some multiple of their minimum participation level.[157] Bidders are required to declare their maximum eligibility in terms of activity units[158] and make the required upfront payment.[159] That is, bidders will be limited to bidding on licenses encompassing no more than the number of activity units covered by their upfront payment. Licenses on which a bidder is the high bidder from the previous round, as well as licenses on which a new valid bid is placed, count toward this activity units limit. Under this approach, bidders have the flexibility to shift their bids among any licenses for which they have applied so long as the total activity units encompassed by those licenses does not exceed the number for which they made an upfront payment. Moreover, bidders are able to secure the freedom to participate at whatever level they deem appropriate by making a sufficient upfront payment. To preserve their maximum eligibility, however, bidders are required to maintain some minimum activity level during each round of the auction.

86. Under the Milgrom-Wilson approach, the minimum activity level, measured as a fraction of the self-declared maximum eligibility, will increase during the course of the auction. For this purpose, Milgrom and Wilson divide the auction into three stages.[160]

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[154] *See Competitive Bidding Third Report and Order,* 9 FCC Rcd. at 2955, ¶ 36. *See also 900 MHz Second Report and Order,* 10 FCC Rcd at 6915, ¶ 83.

[155] *Competitive Bidding Second Report and Order,* 9 FCC Rcd at 2372-73, ¶¶ 144-145.

[156] *See, e.g., 900 MHz Second Report and Order,* 10 FCC Rcd at 6917, ¶ 88. *See also MDS Report and Order*, 10 FCC Rcd at 9643, ¶ 115.

[157] *See, e.g., Competitive Bidding Third Report and Order,* 9 FCC Rcd at 2955, ¶ 37.

[158] *See, e.g., 900 MHz Second Report and Order*, 10 FCC Rcd at 6917, ¶ 87. *See also 220 MHz Second Memorandum Opinion and Order*, 60 Fed. Reg. 46,564 at ¶ 123.

[159] *See* Section III(B)(5)(c), *infra,* for discussion of upfront payments.

[160] The auction would move from stage one to stage two when, after three rounds of bidding, the high bid has changed on five percent or fewer of the licenses (measured in terms of activity units) being auctioned. Stage three would begin when the high bid has changed on two percent or fewer licenses (measured in terms of activity units) over three rounds. We retain the discretion to modify this method and announce such

During the first stage of the auction, a bidder is required to be active on licenses encompassing at least 60 percent of the activity units for which it is eligible. The penalty for falling below that activity level is a reduction in eligibility.[161] During the first stage, if activity is below the required minimum level, eligibility in the next round will be calculated by multiplying the current round activity by five-thirds (5/3).[162] In the second stage, a bidder who wishes to maintain its current eligibility is required to be active on 80 percent of the activity units for which it is eligible in the current round. During the second stage, if activity is below the required minimum level, eligibility in the next round will be calculated by multiplying the current round activity by five-fourths (5/4).[163] In the third stage, a bidder who wishes to maintain its current eligibility is required to be active on licenses encompassing 95 percent of the activity units for which it is eligible in the current round. In the final stage, if activity in the current round is below the required activity level, eligibility in the next round will be calculated by multiplying the current round activity by twenty-nineteenths (20/19).[164] We tentatively conclude that if we decide to use an activity rule, we will use the Milgrom-Wilson approach, and we seek comment on this tentative conclusion.

87. Duration of Bidding Rounds. We propose to retain the discretion to vary the duration of bidding rounds or the interval at which bids are accepted (*e.g.*, run two or more rounds per day rather than one), in order to move the auction toward closure more quickly. If such discretion is employed we would most likely shorten the duration and/or intervals between bidding rounds where there are relatively few licenses to be auctioned, where the value of the licenses is relatively low, or in early rounds to speed the auction process. Where license values are expected to be high or where large numbers of licenses are being auctioned, we propose to increase the duration and/or intervals between bidding rounds. We would announce by Public Notice, and may vary by announcement during an auction, the duration and intervals between bidding rounds. We seek comment on these proposals.

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modification by Public Notice. *See, e.g., Competitive Bidding Third Report and Order,* 9 FCC Rcd at 2956, ¶ 38 n.16.

[161] *Id.* at 2956, ¶ 38.

[162] These activity rules are similar to those of our C Block auction. *See Public Notice,* "Auction Notice and Filing Requirements for 493 BTA Licenses Located on the C Block for Personal Communication Services in the 2 GHz Band, Scheduled for August 2nd, 1995," Report No. AUC-95-05, Auction No. 5, p. 38, May 11, 1995.

[163] *Id.*

[164] *Id.*

d. Anti-Collusion Rules

88. In the *Competitive Bidding Second Report and Order*, we adopted a special rule designed to prevent collusive conduct in the context of competitive bidding.[165] We observed that such a rule would serve the objectives of the 1993 Budget Act by preventing parties, especially the largest firms, from agreeing in advance to bidding strategies that divide the market according to their strategic interests and disadvantage other bidders.[166] The competitiveness of the auction process and of the post-auction market structure will be enhanced by certain additional safeguards designed to reinforce existing laws and facilitate detection of collusive conduct.

89. We tentatively conclude that our anti-collusion rules should be applied to the auctions for paging services. Specifically, we propose to apply Section 1.2105(c) of our rules, which prohibits bidders that have applied for any of the same geographic license areas from communicating with one another regarding the substance of their bids or bidding strategies after short-form applications (FCC Form 175) have been filed. Additionally, applicants may not discuss the substance of their bids or bidding strategies with bidders, other than those identified on the short-form application, that are bidding in the same geographic license areas.[167] The post-filing deadline prohibition on discussions extends to providing indirect information that affects bids or bidding strategy.[168] However, communications among bidders concerning matters unrelated to the license auction would be permitted.[169] It is not our intent to discourage potential applicants from entering into consortia, joint ventures, or similar joint bidding arrangements for geographic licenses prior to the short-form filing deadline. Rather, we intend to provide parties with time to negotiate such arrangements before the application process begins. To avoid compromising the auction process, however, such negotiations must end at the point that short forms are filed.[170] Additionally, we propose to amend Section

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[165] *See* 47 C.F.R. § 1.2105(c).

[166] *See Competitive Bidding Second Report and Order*, 9 FCC Rcd at 2386, ¶ 221.

[167] *See* 47 C.F.R. § 1.2105(c).

[168] *Id.*

[169] *See* Implementation of Section 309(j) of the Communications Act - Competitive Bidding, *Fourth Memorandum Opinion and Order*, PP Docket No. 93-253, 9 FCC Rcd 6858, 6869, ¶ 59 (1994) (*Competitive Bidding Fourth Memorandum Opinion and Order*). *See also* Letter from R. Allen, Acting Chief, Commercial Radio Division, to R.M. Senkowski (Dec. 1, 1994) (discussions that indirectly provide information that affects bidding strategy are also precluded by anti-collusion rules).

[170] Amendment of Parts 21 and 74 of the Commission's Rules With Regard to Filing Procedures in the Multipoint Distribution Service and in the Instructional Television Fixed Service and Implementation of Section 309(j) of the Communications Act -- Competitive Bidding, *Order*, MM Docket No. 94-131, PP Docket No. 93-253 (released Nov. 3, 1995) (*Competitive Bidding Nov. 3, 1995 Order*).

22.129 to prohibit settlements between applicants after the short-form deadline has passed.[171] As in other services, we also propose to require winning bidders to submit with their long-form application a detailed explanation of the terms, conditions and parties involved in any auction-related consortium, joint venture, partnership, or other agreement entered into prior to the close of bidding.

90. If an applicant has the high bid for a license, the applicant must include with its long-form application a detailed explanation of the terms and conditions and parties involved in a bidding agreement into which it has entered.[172] For purposes of the Commission's anti-collusion rules, the term applicant includes the entity submitting the application, owners of five percent or more of the entity, and all officers and directors of that entity.[173] If an agreement, arrangement or understanding of any kind relating to the licenses being auctioned had been entered into with a particular party before the short-form filing date, that party must be disclosed, even if the agreement, arrangement or understanding has not been reduced to writing.[174] If the applicant and a particular party did not enter into any type of agreement, arrangement or understanding prior to the short-form filing date, but were only engaged in negotiations or preliminary discussions, the applicant should not have included the name of such party on its application and may not amend its application to include such party.[175]

91. There are three exceptions to the rule prohibiting discussions with other applicants after the filing of the short-form application. First, an applicant may modify its short-form application to reflect formation of bidding agreements or changes in ownership at any time before or during the auction, as long as the changes do not result in change of control of the applicant, and the parties forming the bidding agreement have not applied for licenses in any of the same geographic license areas.[176] Applicants may also make agreements to bid jointly for licenses, so long as the applicants have not applied for licenses in any of the same geographic license areas.[177] Finally, a holder of a non-controlling attributable interest in an applicant may acquire an ownership interest in, or enter into a bidding agreement with other applicants in the same geographic license area, if (1) the owner of the attributable interest certifies that it has not communicated and will not communicate bids or bidding strategies of more than one of the applicants in which it holds an attributable interest or with which it has

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[171] 47 C.F.R. § 22.129.

[172] 47 C.F.R. § 1.2105(c).

[173] *Id.*

[174] *See Competitive Bidding Nov. 3, 1995 Order*, at ¶ 5.

[175] *Id.*

[176] 47 C.F.R. § 22.115.

[177] *Id.*

a bidding agreement; and (2) the arrangements do not result in any change of control of an applicant.[178]

92. Where the applicant does not meet one of these exceptions, it may not discuss matters relating to bidding, bids, or bidding strategies with other applicants. Even when an applicant has withdrawn its application after the short-form filing deadline, the applicant may not enter into a bidding agreement with another applicant bidding on the geographic license areas from which the first applicant withdrew.[179] In addition, once the short-form application has been filed, a party with an attributable interest in one bidder may not acquire a controlling interest in another bidder bidding for licenses in any of the same geographic license areas.[180]

93. Even where the applicant discloses parties with whom it has reached an agreement on the short-form application, thereby permitting discussions with those parties, the applicant is nevertheless subject to existing antitrust laws.[181] Under the antitrust laws, the parties to an agreement may not discuss bid prices if they have applied for licenses in the same geographic license areas. In addition, agreements between actual or potential competitors to submit collusive, non-competitive or rigged bids are *per se* violations of Section One of the Sherman Antitrust Act.[182] Further, actual or potential competitors may not agree to divide territories horizontally in order to minimize competition, regardless of whether they split a market in which they both do business, or whether they merely reserve one market for one and another for the other.[183]

94. To the extent the Commission becomes aware of specific allegations that may give rise to violations of the federal antitrust laws, the Commission may investigate and/or refer such allegations to the United States Department of Justice for investigation. Bidders who are found to have violated the antitrust laws or the Commission's anti-collusion rules in connection with participation in the auction process may, among other remedies, be subject to the loss of their down payment or their full bid amount, cancellation of their licenses, and

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[178] *Id.*

[179] *Competitive Bidding Fourth Memorandum Opinion and Order*, 9 FCC Rcd at 6867, ¶ 51.

[180] *Id.* at 6869 n.134. We note that this change would constitute a major amendment to the short-form application. *See* discussion in ¶ 102 *infra.*

[181] *Id.* at 6869 n.134. *See also*, Sherman Act, 5 U.S.C. § 1, *et seq.*

[182] *Id.*

[183] *Id.*

may be prohibited from participating in future auctions.[184] We seek comment on these proposals.

3. Procedural and Payment Issues

a. Pre-Auction Application Procedures

95. In the *Competitive Bidding Second Report & Order*, the Commission established general competitive bidding rules and procedures which we noted may be modified on a service-specific basis.[185] As discussed below, we propose to follow generally those processing and procedural rules, with certain modifications to address the particular characteristics of the paging services. These proposed rules are structured to ensure that bidders and licensees are qualified and will be able to construct systems quickly and offer service to the public. By ensuring that bidders and license winners are serious, qualified applicants, these proposed rules will minimize the need to re-auction licenses and prevent delays in the provision of paging services to the public.

96. As geographic licensees will gain use of a large geographic area and the freedom to locate base stations anywhere within that larger geographic region, they differ from the existing paging service licenses that are essentially confined to the smaller region. Accordingly, we propose to treat all geographic applicants as initial applicants for Public Notice, application processing, and auction purposes, regardless of whether they are already incumbent operators.

97. Section 309(j)(5) of the Communications Act provides that no party may participate in an auction "unless such bidder submits such information and assurances as the Commission may require to demonstrate that such bidder's application is acceptable for filing."[186] Moreover, "[n]o license shall be granted to an applicant selected pursuant to this subsection unless the Commission determines that the applicant is qualified pursuant to Section 309(a) and Section 308(b) and 310" of the Communications Act.[187] As the legislative history of Section 309(j) makes clear, the Commission may require that bidders' applications contain all information and documentation sufficient to demonstrate that the application is not in violation of Commission rules, and we propose to dismiss applications not meeting those requirements prior to the competitive bidding.[188]

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[184] *See, e.g., 900 MHz Second Order on Reconsideration*, 60 Fed. Reg. 48,913 at ¶ 94. *See also 900 MHz Second Report and Order*, 10 FCC Rcd at 6920, ¶ 96.

[185] *See* 9 FCC Rcd at 2360-2400, ¶¶ 68-247. *See also* 47 C.F.R. Part 1, Subpart Q.

[186] 47 U.S.C. § 309(j)(5).

[187] *Id.*

[188] *See* H.R. Rep. No. 111, 103rd Cong., 1st Sess. 258 (1993) (House Report).

98. In the *Competitive Bidding Second Report and Order*, we determined that we should require only a short-form application prior to competitive bidding, and that only winning bidders should be required to submit a long-form license application after the auction. As we determined that such a procedure would fulfill the statutory requirements and objectives and adequately protect the public interest, we incorporated these requirements into the rules adopted in the *Competitive Bidding Second Report and Order*.[189] Accordingly, we propose to extend the application of these rules to the competitive bidding process for paging services.

99. Under this proposal, before a paging services auction, the Wireless Telecommunications Bureau would release an initial Public Notice announcing the auction. The initial Public Notice would specify the licenses to be auctioned and the time and place of the auction in the event that mutually exclusive applications are filed. The Public Notice would specify the method of competitive bidding to be used, applicable bid submission procedures, stopping rules, activity rules, and the deadline by which short-form applications must be filed and the amounts and deadlines for submitting the upfront payment.[190] Applications submitted before the release of the Public Notice would be returned as premature. Likewise, applications submitted *after* the deadline specified by Public Notice would be dismissed, with prejudice, as untimely. We seek comment on these proposals.

100. All bidders would be required to submit short-form applications on FCC Form 175 (and FCC Form 175-S, if applicable), by the date specified in the initial Public Notice. Applicants would be encouraged to file FCC Form 175 electronically. Detailed instructions regarding electronic filing would be contained in the Bidder Information Package. Those applicants filing manually would be required to submit one paper original and one diskette original of their application, as well as two diskette copies. The short-form applications would require applicants to provide the information required by Section 1.2105(a)(2) of the Commission's rules.[191] Specifically, each applicant would be required to specify on its FCC Form 175 application certain identifying information, including its status as a designated entity (if applicable),[192] its classification (*i.e.*, individual, corporation, partnership, trust, or other), the geographic areas and channel(s) or channel blocks(s) for which it is applying, and assuming that the licenses will be auctioned, the names of persons authorized to place or withdraw a bid on its behalf. We also seek comment on whether we should require further ownership disclosure. For example, we could require applicants to disclose all businesses in which an attributable stockholder owns at least 5 percent, or we could require disclosure of only controlling interests and/or real parties in interest. We could require disclosure of all

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[189] *See* 47 C.F.R. §§ 1.2104, 1.2107.

[190] *See Competitive Bidding Second Report and Order*, 9 FCC Rcd at 2376, ¶ 164.

[191] 47 C.F.R. § 1.2105(a)(2).

[192] See ¶¶ 110-119, *infra*, for a definition and discussion of designated entities.

subsidiaries, affiliates, and partnerships of the applicant. We seek comment on what type of ownership disclosure should be required, as well as when it should be required; *e.g.* should it be filed with FCC Form 175, FCC Form 600, or at another time?

101. As we indicated in the *Competitive Bidding Second Report and Order*, if we receive only one application that is acceptable for filing for a particular license, and thus there is no mutual exclusivity, we propose to issue a Public Notice cancelling the auction for that license and establishing a date for the filing of a long-form application (FCC Form 600), the acceptance of which would trigger the procedures permitting petitions to deny (as discussed at ¶¶ 106-107, *infra*).[193] If no petitions to deny are filed, the application would be grantable after 30 days. We seek comment on the proposals discussed above.

b. Amendments and Modifications

102. To encourage maximum bidder participation for paging licenses, we propose to provide applicants with an opportunity to correct minor defects in their short-form applications prior to the auction. On the date set for submission of corrected applications, applicants that on their own discover minor errors in their applications (*e.g.*, typographical errors, incorrect license designations, etc.) would be permitted to file corrected applications. Applicants would not be permitted to make any major modifications to their applications, including changes in markets and changes in control of the applicant, or additions of other bidders into the bidding consortia, until after the auction. Applicants could modify their short-form applications to reflect formation of consortia or changes in ownership at any time before or during an auction, provided such changes would not result in a change in control of the applicant, and provided that the parties forming consortia or entering into ownership agreements have not applied for licenses in any of the same geographic license areas.[194] The Commission waived the *ex parte* rules as they apply to the submission of amended short-form applications, to maximize applicants' opportunities to seek Commission staff advice on making such amendments.[195] In addition, applications that are not signed would be dismissed as unacceptable.

103. Upon reviewing the short-form applications, we would release a Public Notice listing all accepted, rejected, and incomplete applications. Applicants would be given an opportunity to cure incomplete applications. An applicant who fails to submit a sufficient

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[193] *See Competitive Bidding Second Report and Order*, 9 FCC Rcd at 2376, ¶ 165.

[194] *See* Implementation of Section 309(j) of the Communications Act - Competitive Bidding, *Second Memorandum Opinion and Order*, PP Docket No. 93-253, 9 FCC Rcd 7245, 7254, ¶ 52 (1994) (*Competitive Bidding Second Memorandum Opinion and Order). See also* discussion of modifications to short form application at ¶¶ 102-103, *infra*).

[195] Commission Announces that Mutually Exclusive "Short Form" Applications (Form 175) to Participate in Competitive Bidding Process ("Auctions") are Treated as Exempt for *Ex Parte* Purposes, *Public Notice*, 9 FCC Rcd at 6760 (1994).

upfront payment to qualify it to bid on any license being auctioned would not be identified on this Public Notice as a qualified bidder. Each applicant listed on this Public Notice would be issued a bidder identification number and further information and instructions regarding auction procedures. We seek comment on the proposals discussed above.

c. Upfront Payments

104. As in the case of other auctionable services, we propose to require paging competitive bidding participants to tender in advance to the Commission a substantial upfront payment as a condition of bidding, in order to ensure that only serious, qualified bidders participate in auctions and to ensure payment of the penalty in the event of bid withdrawal or default. For services that are licensed by simultaneous multiple round auction, we have established a standard upfront payment formula of $0.02 per activity unit for the largest combination of MHz-pops a bidder anticipates bidding on in any single round of bidding. The *Competitive Bidding Second Report and Order* also established a minimum upfront payment of $2,500, but we indicated that this minimum amount could be modified on a service-specific basis.[196] For paging services, we propose a minimum upfront payment of $0.02 per activity unit or $2,500, whichever is greater. We tentatively conclude that a minimum $2,500 upfront payment should be required regardless of the bidding methodology we employ. We seek comment on our proposal regarding the appropriate minimum upfront payment for paging applications. In particular, we seek comment on whether a minimum upfront payment of $2,500 is sufficient to discourage frivolous or speculative bidders in the competitive bidding process.

105. Upfront payments would be due approximately 14 days before a scheduled auction.[197] This period should be sufficient to allow the Commission time to process upfront payment data and release a Public Notice listing all qualified bidders. The specific procedures to be followed in the tendering and processing of upfront payments are set forth in Section 1.2106 of the Commission's rules.[198]

d. Down Payment and Full Payment

106. In the *Competitive Bidding Second Report and Order*, we established a down payment requirement for winning bidders of 20 percent of the winning bid amount to discourage default between the auction and licensing and to ensure payment of the monetary assessment if such default occurs.[199] We concluded that this requirement was appropriate to

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[196] *Competitive Bidding Second Report and Order*, 9 FCC Rcd at 2379, ¶ 180.

[197] *Id.* at 2380, ¶ 188.

[198] 47 C.F.R. § 1.2106.

[199] *Competitive Bidding Second Report and Order*, 9 FCC Rcd at 2380, ¶ 190.

ensure that auction winners have the necessary financial capabilities to complete payment for the license and to pay for the costs of constructing a system, while not being so onerous as to hinder growth or diminish access.[200] We propose to apply the 20 percent down payment requirement to winning bidders for paging licenses. Such a down payment would be due within five business days following the Public Notice announcing the winning bidders. We further propose to require paging auction winners to pay the full balance of their winning bids within five business days following Public Notice that the Commission is about to award the license. We seek comment on this proposal.[201]

e. Bid Withdrawal, Default, and Disqualification

107. We propose to adopt bid withdrawal, default, and disqualification rules for the paging services based on the procedures in our general competitive bidding rules.[202] Under these procedures, any bidder who withdraws a high bid during an auction before the Commission declares bidding closed, or defaults by failing to remit the required down payment within the prescribed time, would be required to reimburse the Commission. The bidder would be required to pay the difference between its high bid and the amount of the winning bid the next time the license is offered by the Commission, if the subsequent winning bid is lower. A defaulting auction winner would be assessed an additional payment of three percent of the subsequent winning bid or three percent of the amount of the defaulting bid, whichever is less. The additional payment would be satisfied first from the upfront payment, and additional funds would be required if necessary. In the event that an auction winner defaults or is otherwise disqualified, we propose to re-auction the license either to existing or new applicants. The Commission would retain discretion, however, to offer the license to the next highest bidder at its final bid level if the default occurs within five business days of the close of bidding. We seek comment on these proposed procedures.

f. Long-Form Applications

108. If the winning bidder makes the down payment in a timely manner, we propose the following procedures: A long-form application would be filed by a date specified by Public Notice, generally within ten (10) business days after the close of bidding. After the Commission receives the winning bidder's down payment and long-form application, we will review the long-form application to determine if it is acceptable for filing. In addition to the information required in the FCC Form 600, designated entities will be required to submit evidence to support their claim to any special provision available for designated entities described in this *Notice*. This information may be included in an exhibit to FCC Form 600. This information will enable the Commission, and other interested parties, to ensure the validity of the applicant's certification of eligibility for bidding credits, installment payment

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[200] *Id.*

[201] Special provisions for small businesses are discussed in ¶ 128, *infra*.

[202] 47 C.F.R. §§ 1.2104(g) and 1.2109.